

CLAIMS

1. An aqueous heat-resistant coating composition comprising:

- 5 (A) an aqueous carboxy-containing acrylic-modified epoxy resin dispersion obtained by neutralizing a carboxy-containing acrylic-modified epoxy resin with a basic compound and dispersing the neutralized resin in an aqueous medium;
- (B) an inorganic coloring pigment; and
- 10 (C) a rust-preventive pigment.

2. The aqueous heat-resistant coating composition according to claim 1 wherein the carboxy-containing acrylic-modified epoxy resin is obtained by esterifying (a) a bisphenol epoxy resin and (b) a carboxy-containing acrylic resin.

- 15 3. The aqueous heat-resistant coating composition according to claim 1 wherein the carboxy-containing acrylic-modified epoxy resin is obtained by graft polymerizing onto (a) a bisphenol epoxy resin a monomer mixture comprising a carboxy-containing polymerizable unsaturated monomer.

- 20 4. The aqueous heat-resistant coating composition according to claim 1 wherein the inorganic coloring pigment (B) is manganese dioxide.

5. The aqueous heat-resistant coating composition according to claim 1 wherein the rust-preventive pigment (C) is
- 25 an aluminum dihydrogen tripolyphosphate rust-preventive pigment.

6. The aqueous heat-resistant coating composition according to claim 5 wherein the aluminum dihydrogen tripolyphosphate rust-preventive pigment has been surface-treated with magnesium oxide or zinc oxide.

- 30 7. The aqueous heat-resistant coating composition according to claim 1 wherein the total amount of inorganic coloring pigment (B) and rust-preventive pigment (C) is 5 to 100 parts by weight per 100 parts by weight of aqueous carboxy-containing acrylic-modified epoxy resin dispersion (A), on a
- 35 solids basis.

8. The aqueous heat-resistant coating composition according to claim 1 which further comprises (D) a resol phenolic resin.

5 9. The aqueous heat-resistant coating composition according to claim 8 wherein the resol phenolic resin (D) has a number average molecular weight of 200 to 2,000 and an average of 0.3 to 4.0 methylol groups per benzene nucleus.

10 10. The aqueous heat-resistant coating composition according to claim 8 wherein the amount of resol phenolic resin (D) is 0.1 to 30 parts by weight per 100 parts by weight of aqueous carboxy-containing acrylic-modified epoxy resin dispersion (A), on a solids basis.

15 11. An application process comprising applying the aqueous heat-resistant coating composition of claim 1 to a metal substrate and then heat-drying to form a heat-resistant dried coating film.

12. The process according to claim 11 wherein the heat-drying is performed by electromagnetic induction heating.

20 13. The process according to claim 11 wherein the metal substrate is a disc break part.

25 14. An application process comprising heating a metal substrate by electromagnetic induction and then applying the aqueous heat-resistant coating composition of claim 1 to the substrate, followed by allowing the residual heat to dry the composition to form a heat-resistant dried coating film.

15. The process according to claim 14 wherein the metal substrate is a disc break part.

30 16. A coated article comprising a heat-resistant dried coating film formed on a metal substrate by the process of claim 11.

17. The coated article according to claim 16 wherein the metal substrate is a disc break part.

35 18. A coated article comprising a heat-resistant dried coating film formed on a metal substrate by the process of claim 14.

19. The coated article according to claim 18 wherein the metal substrate is a disc break part.